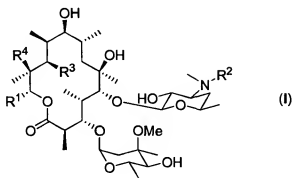


## CLAIMS

What is claimed is:

1. A compound having the formula (I)



and the pharmaceutically acceptable salts, esters, and prodrug forms thereof, wherein

R<sup>1</sup> is substituted or unsubstituted C<sub>1</sub>-C<sub>10</sub> alkyl, substituted or unsubstituted C<sub>2</sub>-C<sub>10</sub> alkenyl, substituted or unsubstituted C<sub>2</sub>-C<sub>10</sub> alkynyl, substituted or unsubstituted aryl, or substituted or unsubstituted heterocyclo;

R<sup>2</sup> is H, substituted or unsubstituted C<sub>1</sub>-C<sub>5</sub> alkyl, substituted or unsubstituted C<sub>2</sub>-C<sub>5</sub> alkenyl, substituted or unsubstituted C<sub>2</sub>-C<sub>5</sub> alkynyl, substituted or unsubstituted aryl, or substituted or unsubstituted heterocyclo;

R<sup>3</sup> is H or OH; and

R<sup>4</sup> is H or OH, or R<sup>3</sup> and R<sup>4</sup> taken together form O-(C=O)-O; with the proviso that when (a) R<sup>1</sup> is ethyl and (b) R<sup>3</sup> is OH or R<sup>3</sup> and R<sup>4</sup> taken together form O-C(=O)-O, then R<sup>2</sup> is not H or methyl.

2. A compound according to Claim 1 wherein

R<sup>1</sup> is substituted or unsubstituted C<sub>1</sub>-C<sub>10</sub> alkyl, substituted or unsubstituted C<sub>2</sub>-C<sub>10</sub> alkenyl, substituted or unsubstituted C<sub>2</sub>-C<sub>10</sub> alkynyl, substituted or unsubstituted aryl, or substituted or unsubstituted heterocyclo;

R<sup>2</sup> is H, ethyl, propyl, isopropyl, or 2-butyl; and

R<sup>3</sup> and R<sup>4</sup> are OH,

with the proviso that when R<sup>1</sup> is ethyl, then R<sup>2</sup> is not H or methyl.

3. A compound according to Claim 1 wherein:

5 R<sup>1</sup> is substituted or unsubstituted C<sub>1</sub>-C<sub>5</sub> alkyl;

R<sup>2</sup> is H, substituted or unsubstituted C<sub>1</sub>-C<sub>5</sub> alkyl, substituted or unsubstituted C<sub>2</sub>-C<sub>5</sub> alkenyl, or substituted or unsubstituted C<sub>2</sub>-C<sub>5</sub> alkynyl; and

R<sup>3</sup> and R<sup>4</sup> are OH,

with the proviso that when R<sup>1</sup> is ethyl, then R<sup>2</sup> is not H or methyl.

10 4. A compound according to Claim 1 wherein:

R<sup>1</sup> is ethyl;

R<sup>2</sup> is ethyl, propyl, isopropyl, or 2-butyl; and

R<sup>3</sup> and R<sup>4</sup> are OH.

5. A compound according to Claim 1 wherein:

15 R<sup>1</sup> is substituted ethyl;

R<sup>2</sup> is H, substituted or unsubstituted C<sub>1</sub>-C<sub>5</sub> alkyl, substituted or unsubstituted C<sub>2</sub>-C<sub>5</sub> alkenyl, or substituted or unsubstituted C<sub>2</sub>-C<sub>5</sub> alkynyl; and

R<sup>3</sup> and R<sup>4</sup> are OH.

6. A compound according to Claim 1 wherein:

20 R<sup>1</sup> is substituted ethyl;

R<sup>2</sup> is H, ethyl, propyl, isopropyl, or 2-butyl; and

R<sup>3</sup> and R<sup>4</sup> are OH.

7. A compound according to Claim 1 wherein:

R<sup>1</sup> is propyl;

R<sup>2</sup> is H, substituted or unsubstituted C<sub>1</sub>-C<sub>5</sub> alkyl, substituted or unsubstituted C<sub>2</sub>-C<sub>5</sub> alkenyl, or substituted or unsubstituted C<sub>2</sub>-C<sub>5</sub> alkynyl; and

R<sup>3</sup> and R<sup>4</sup> are OH.

8. A compound according to claim 1, wherein

5 R<sup>3</sup> and R<sup>4</sup> are independently H or OH;

R<sup>1</sup> is selected from the group consisting of ethyl, 2-fluoroethyl, and 1-propyl; and

R<sup>2</sup> is selected from the group consisting of methyl, ethyl, isopropyl, and 2-butyl;

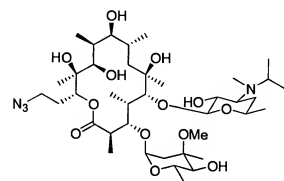
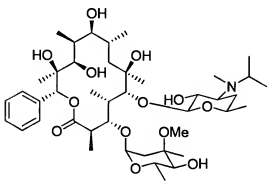
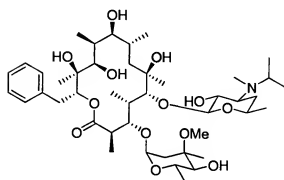
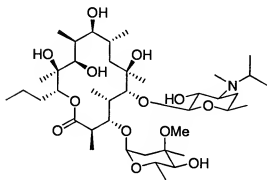
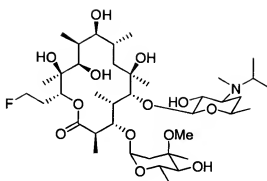
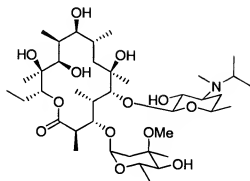
with the proviso that when R<sup>1</sup> is ethyl and R<sup>3</sup> is OH, then R<sup>2</sup> is not methyl.

9. A compound according to claim 1, wherein R<sup>1</sup>, R<sup>2</sup>, R<sup>3</sup> and R<sup>4</sup> are according

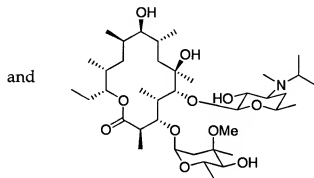
10 to the combinations set forth in the table below:

R <sup>1</sup>	R <sup>2</sup>	R <sup>3</sup>	R <sup>4</sup>
CH <sub>3</sub> CH <sub>2</sub>	CH(CH <sub>3</sub> ) <sub>2</sub>	OH	OH
FCH <sub>2</sub> CH <sub>2</sub>	CH <sub>3</sub>	OH	OH
FCH <sub>2</sub> CH <sub>2</sub>	CH <sub>2</sub> CH <sub>3</sub>	OH	OH
FCH <sub>2</sub> CH <sub>2</sub>	CH(CH <sub>3</sub> ) <sub>2</sub>	OH	OH
CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub>	CH <sub>3</sub>	OH	OH
CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub>	CH(CH <sub>3</sub> ) <sub>2</sub>	OH	OH
CH <sub>3</sub> CH <sub>2</sub> CH <sub>2</sub>	C(CH <sub>3</sub> )CH <sub>2</sub> CH <sub>3</sub>	OH	OH
CH <sub>3</sub> CH <sub>2</sub>	CH(CH <sub>3</sub> ) <sub>2</sub>	H	H

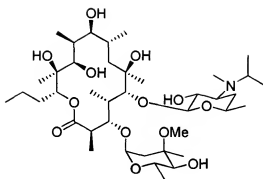
10. A compound according to Claim 1 selected from the group consisting of:



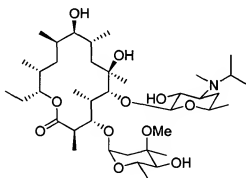
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11. A compound according to claim 1, having a structure of the formula:



12. A compound according to claim 1, having a structure of the formula:



13. A pharmaceutical composition comprising a compound according to  
 5 Claim 1 together with a pharmaceutically acceptable carrier.
14. A method for the treatment of a disorder of gastric motility in a patient suffering therefrom, comprising administering to the patient a therapeutically effective dose of a composition of Claim 1.
15. The use of a compound according to claim 1 for the preparation of a  
 10 medicament for treating a disorder of gastric disorder in a patient.
16. A recombinant host cell engineered to produce 11-deoxyerythromycins, which host cell is capable of expressing a modified version of the DEBS suite of genes (*eryAI*, *eryAII*, and *eryAIII*) in which the *eryAI* gene has been engineered by replacement of the ketoreductase domain in module 2 thereof with a cassette con-

taining a dehydratase domain, an enoylreductase domain, and a ketoreductase domain.

17. A recombinant host cell according to claim 16, derived from *Saccharopolyspora erythraea* K24-1/159-44.

- 5 18. A method of producing 11-deoxyerythromycins, comprising culturing a recombinant host cell that is capable of expressing a modified version of the DEBS suite of genes (*eryAI*, *eryAII*, and *eryAIII*) in which the *eryAI* gene has been engineered by replacement of the ketoreductase domain in module 2 thereof with a cassette containing a dehydratase domain, an enoylreductase domain, and a keto-  
10 reductase domain and optionally recovering the 11-deoxyerythromycins produced.

19. A method of claim 18, wherein the host cell is derived from *Saccharopolyspora erythraea* K24-1/159-44.

20. A method according to claim 18, wherein the 11-deoxyerythromycin is 11-deoxyerythromycin B.

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